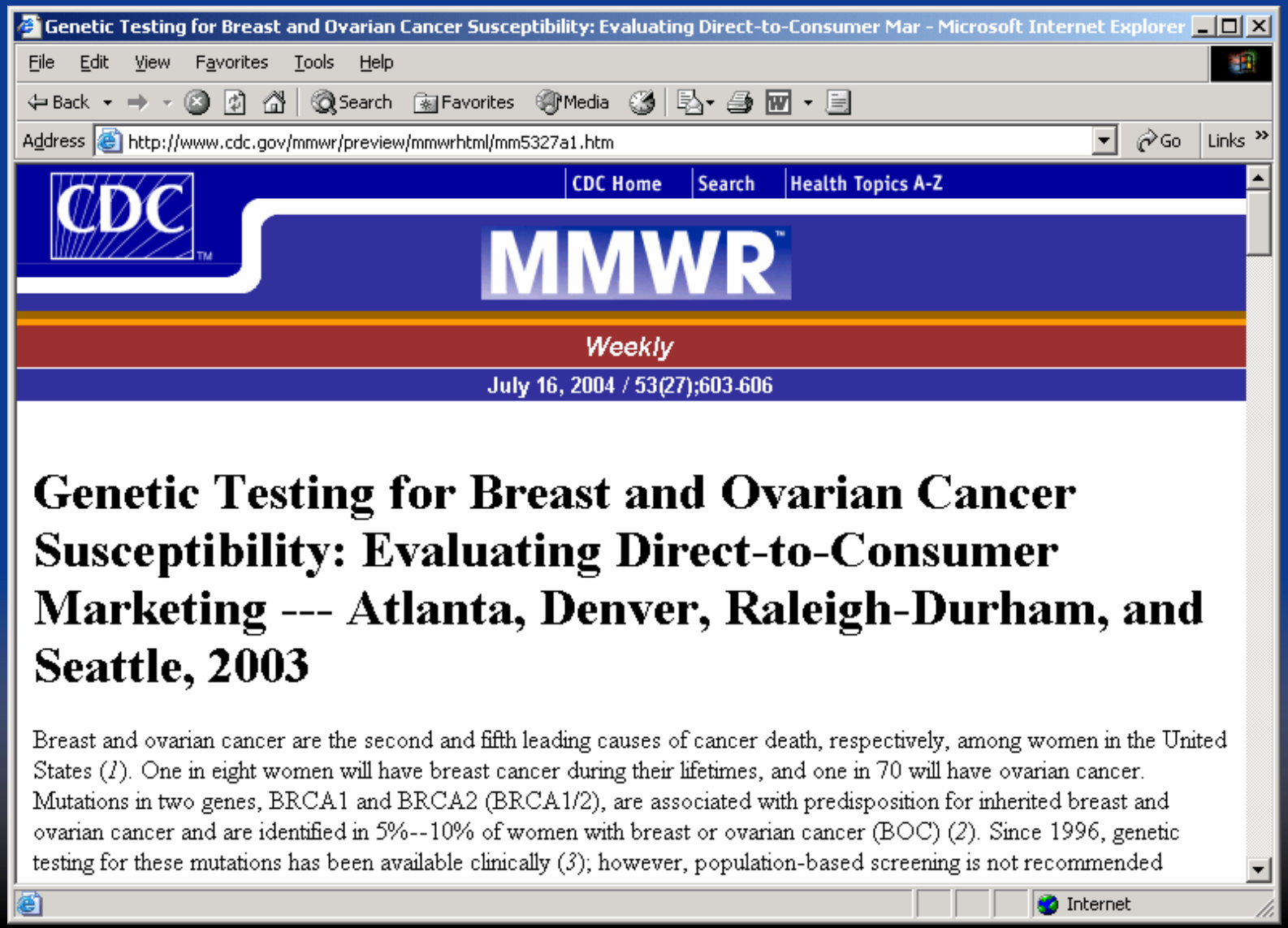
Investigation of a direct-to-consumer marketing campaign

Genetic testing for breast and ovarian cancer susceptibility

Melanie Myers, Cynthia Jorgensen, James Litch,
Sidibe Kassim, Linda Bradley
Centers for Disease Control and Prevention (CDC)

www.cdc.gov/genomics



Direct-to-Consumer (DTC) Marketing Campaign

- DNA-based test marketed directly to public
  - Women 25-54 years and their providers
  - Atlanta, GA and Denver, CO
- Stated objectives of campaign:
  - Create awareness among target population
  - Encourage consumers to talk to providers

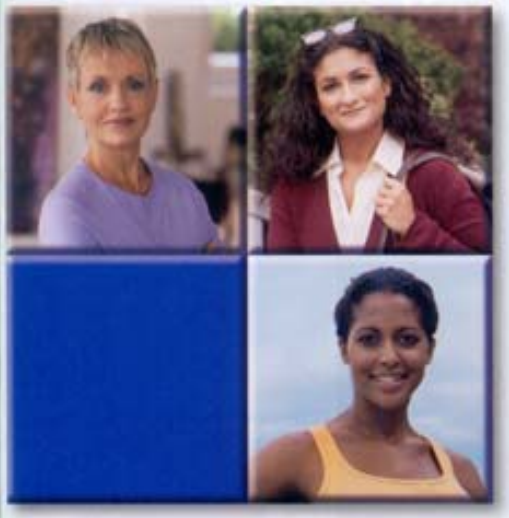
DTC Campaign

Consumers

- TV, radio, magazine
  - Sept 2002 – Feb 2003

Providers

- Mailer to inform about campaign
- Rollout meetings to promote awareness
- Support materials
- Toll-free number and patient website



Does breast or ovarian cancer run in your family?

You can reduce your risk. We can help.

For some families, breast or ovarian cancer has become an important health concern. About 10% of breast and ovarian cancers are inherited. And if one or more women in your family were diagnosed with breast cancer before the age of 50, or with ovarian cancer at any age, you could be at increased risk. Ask your doctor about hereditary cancer testing. *Because understanding your risk is the first step to reducing it.*

Even if it runs in your family, cancer doesn't have to be inevitable. There's a way to get the answers you need through BRACAnalysis®—a blood test that helps you find out your risk for developing hereditary breast or ovarian cancer. With cancer risk assessment, including a discussion of testing and medical options, you have the chance to start fighting cancer before it even develops. *After BRACAnalysis®, you and your doctor can discuss effective choices and steps you can take to reduce your cancer risk.* Your results are kept confidential, and most health insurance plans cover testing.

Research shows that early detection—along with proactive medical care—has been proven to help reduce cancer risk, and save lives.

ARE YOU READY AGAINST CANCER?

Talk to your doctor, or call today for your free educational video.

(toll-free)
1.866.BRACNow
www.bracnow.com

BRACAnalysis®
Be Ready Against Cancer®

DTC Media Ad

Commercial

Public Health Significance

- First time an established genetic test marketed directly to public
- Test is not appropriate for majority of population
- Complexities surrounding test itself

Field Investigation

- CDC & 4 state health departments
- Consumer and Provider Surveys
- Two target cities (Atlanta and Denver)
- Two control cities (Raleigh-Durham and Seattle)

Field Investigation: “EPI-AID”

- CDC mechanism
  - Provide support for epidemiologic field investigations
  - Request of a state or international health agency
- CDC staff (EIS Officers) act as consultants

Field Investigation: “EPI-AID”

- Investigate
  - Patterns of disease or injury occurrence
  - Levels of risk behaviors
  - Identify etiologic agents
  - Transmission of condition
  - Impact of preventive interventions
- Goal
  - Rapidly institute prevention and control measures

Conditions for an EPI-AID

- Assistance requested by state health agency or foreign government
- State epidemiologists and EIS officers informed
- Request involves problem of PH importance
- Timely response is required
- Epidemiologic methods required
- Investigation contribute to development of EIS Officer

Approvals/Clearances

- Human subjects review by an IRB may be required
- Office of Management and Budget clearance for data collection obtained in advance
- Limited to 30 days in the field

Surveys

- Consumers
  - Phone survey (CATI programmed)
  - Randomly selected women ages 25-54
  - 51 questions
  - April 21-May 20, 2003
- Providers
  - Mail survey (Fed-Ex)
  - Randomly selected physicians (family practice, internal medicine, obstetrics/gynecology, oncology)
  - 35 questions
  - May 1-May 22, 2003

Survey Questions

Consumer Survey

- Cancer family history
- Awareness of campaign
- Interest in test
- Discussions with others

Provider Survey

- Awareness of campaign
- Knowledge of inherited breast/ovarian cancer
- Changes in practice subsequent to the campaign

Response Rates

- Consumers
  - 1,635 phone surveys completed (response rate 45%)
- Provider
  - 1054 eligible surveys completed (response rate 66%)

Consumer Demographics

		Denver (n=401)	Atlanta (n=410)	Raleigh (n=403)	Seattle (n=421)
Mean age (yrs)		41	40	40	41
Race (%)	White	87	73	72	88
	Black	1	21	19	1
	Other	12	6	9	11
Education (%)	≤ 12	21	25	32	21
	College Grad	50	42	39	44
1st DR (%)		14	13	11	14

Consumer Awareness and Interest in Test

	Denver (n=401)	Atlanta (n=410)	Raleigh (n=403)	Seattle (n=421)	P-value
Heard of test (%)	45	39	21	24	<.001
Interested in test (%)	38	46	31	36	0.08
1st DR (%)	46	47	54	46	NS
Talk to anyone (%)	8	6	6	7	0.96
Provider	58	83	70	82	
Friend/Family	61	61	43	61	

Consumer Awareness of Campaign

	Denver (n=401)	Atlanta (n=410)	Raleigh (n=403)	Seattle (n=421)	p-value
Consumer saw ad (%)*	36	42	23	12	<.001
Worry –Br Ca	41	47	58	44	.12
Worry – Ov Ca	28	34	47	24	.08
Want to know if have gene	72	81	88	74	.13
Results help prevent cancer	51	52	67	41	.23

Test Uptake

	Denver (n=401)	Atlanta (n=410)	Raleigh (n=403)	Seattle (n=421)	p-value
Relative considering test (%)	3 (13)	6 (22)	6 (24)	3 (13)	.86
1st DR (%)	8	13	15	7	.91
Relative was tested (%)	1	2	5	3	.01
1st DR (%)	2	6	13	7	.71

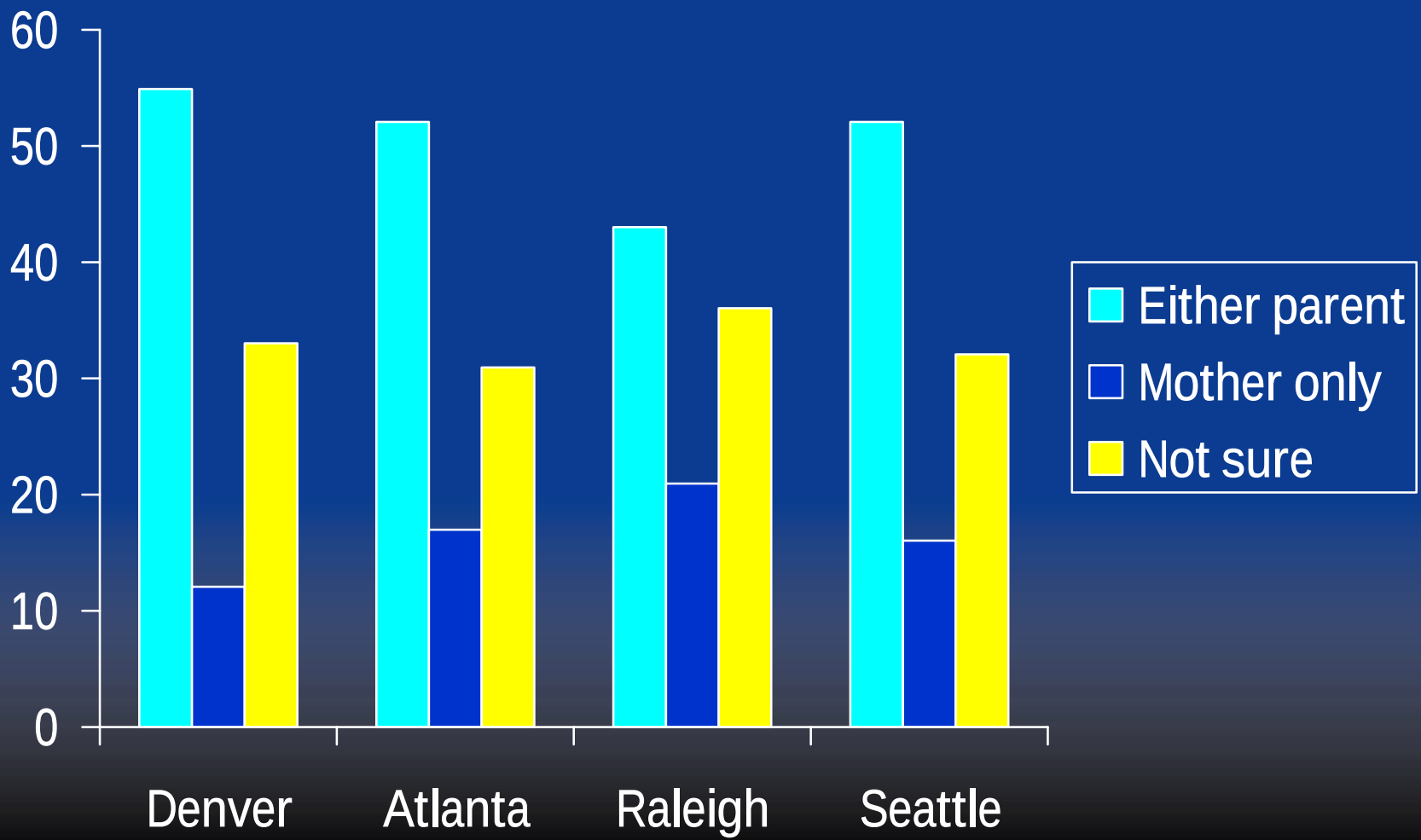
Provider Awareness of Campaign

	Denver (n=270)	Atlanta (n=292)	Raleigh (n=164)	Seattle (n=328)	p-value
Provider saw ad (%)	39	44	29	18	<.001
Patients saw ad (%)	28	27	10	8	<.001

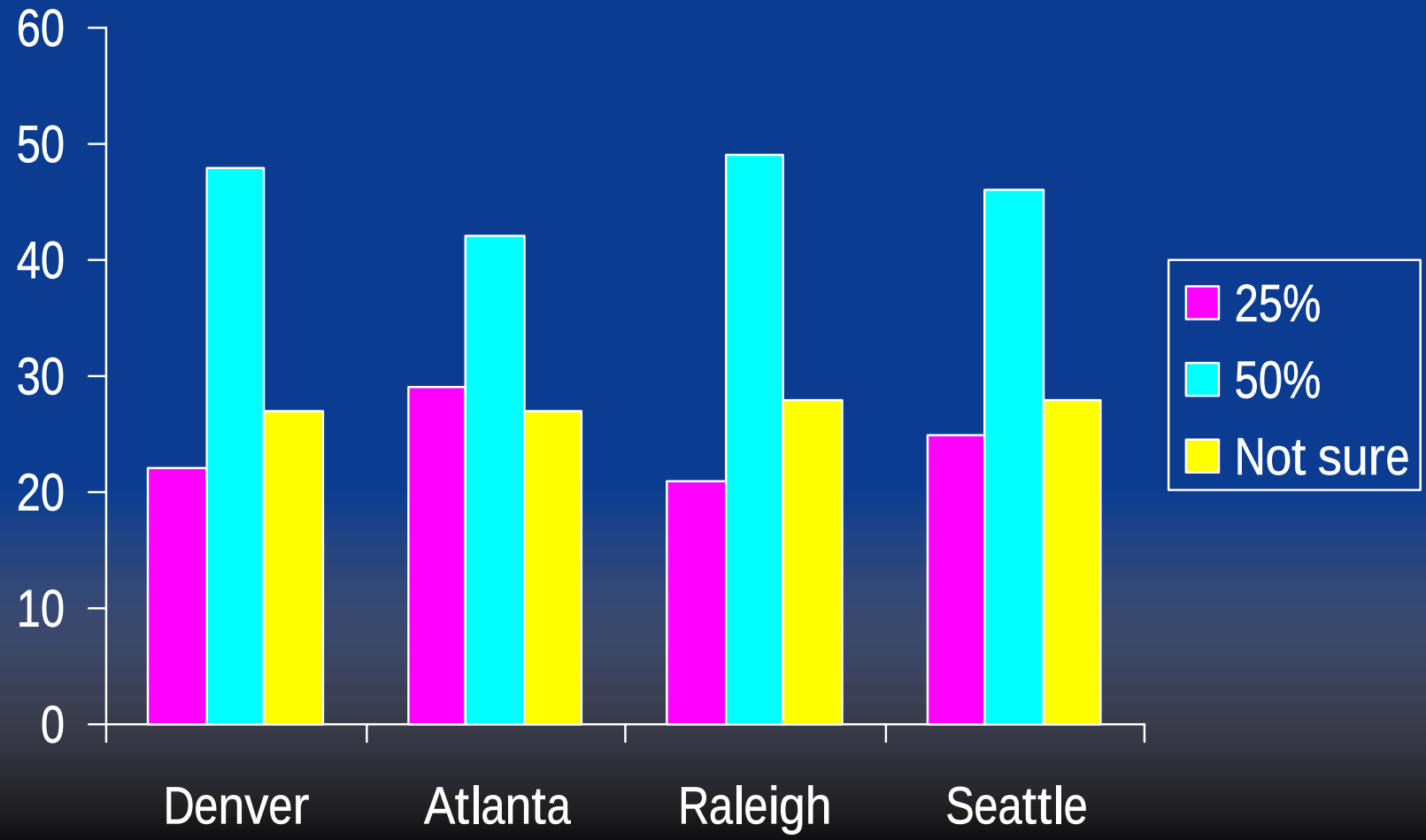
Provider Awareness of Campaign by Specialty

	FP (n=377)	Int Med (n=321)	Ob/Gyn (n=243)	Oncology (n=113)	p-value
Provider saw ad (%)	28	33	43	38	<.001
Patients saw ad (%)	15	12	36	22	<.001

Women can inherit a BRCA1/2 mutation from?



What is the chance that a healthy woman who has a 30 yr old sister with a known BRCA1 mutation has inherited the same mutation?



Provider Practice Patterns by City

Comparing the last six months to one year ago

	Denver (n=270)	Atlanta (n=292)	Raleigh (n=164)	Seattle (n=328)	p-value
Questions increased (%)	41	39	22	23	<.001
Patient referral requests increased (%)	25	18	11	13	<.001
Provider referrals increased (%)	33	27	24	28	0.21

Provider Practice Patterns by City

Comparing the last six months to one year ago

	Denver (n=270)	Atlanta (n=292)	Raleigh (n=164)	Seattle (n=328)	p-value
Testing requests Increased (%)	31	25	14	14	<.001
Number of tests ordered increased (%)	17	18	9	9	<.001
Need to learn more increased (%)	76	76	76	71	.18

Increase in patients asking questions

Comparing the last six months to one year ago

	FP	Int Med	Ob/Gyn	Onc
Denver (%)	35	32	58	48
Atlanta (%)	28	37	45	50
Raleigh (%)	19	14	28	50
Seattle (%)	11	22	33	47
p-value	S	S	S	NS

Increase in patient test requests

Comparing the last six months to one year ago

	FP	Int Med	Ob/Gyn	Onc
Denver (%)	26	25	41	42
Atlanta (%)	13	24	27	45
Raleigh (%)	15	7	16	27
Seattle (%)	10	14	16	27
p-value	S	S	S	NS

Increase in number of tests ordered

Comparing the last six months to one year ago

	FP	Int Med	Ob/Gyn	Onc
Denver (%)	10	11	25	36
Atlanta (%)	9	19	22	26
Raleigh (%)	2	3	21	29
Seattle (%)	4	8	3	35
p-value	S	S	S	NS

Summary – Consumers

- Awareness increased
- Consumers in pilot cities did not report more
  - Interest in test among relatives
  - Uptake of test among relatives
  - Discussions with providers
  - Cancer worries
  - Desire to know if have a mutation
  - Perception that test results could help prevent Ca

Summary – Providers

- Awareness increased but knowledge did not
- Providers in the pilot cities reported more:
  - Questions
  - Patient requests for referrals and testing
  - Tests ordered
- Ob/gyns and oncologists received the most questions and requests, and ordered the most tests
- All providers reported a need to learn more

Needs

- Education for consumers and providers
- Data on test utilization and access
- Collaboration for an evidence-based approach
- Models for integrating genomics into health care and disease prevention

Acknowledgements

State Health Departments

Jillian Jacobellis, CO
Linda Martin, GA
Ken Powell, GA
Jeffrey Engle, NC
Juliet Van Eenwyk, WA

Survey Workgroup Members

Sidibe Kassim, EIS Officer
Jim Litch, EIS Officer
Lori Armstrong, CDC
Barbara Bernhardt, Johns Hopkins
Linda Bradley, CDC

Survey Workgroup Members

Deb Bowen, UW
Debra Doyle, UW
Andy Faucett, CDC
Jillian Jacobellis, CO
Cynthia Jorgensen, CDC
Deb Irwin, UNC
Barbara McGrath, UW
Judy Mouchawar, CO
Melanie Myers, CDC
Kris Peterson, CDC